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#### INTELLIGENCE BRIEF

PHOTOGRAPHIC AND COMMUNICATIONS INTELLIGENCE SUBSTANTIATES SEVERE FLOODING IN THE NORTH CHINA PLAIN IN 1964

DIRECTORATE OF INTELLIGENCE

Office of Research and Reports

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# PHOTOGRAPHIC AND COMMUNICATIONS INTELLIGENCE SUBSTANTIATES SEVERE FLOODING IN THE NORTH CHINA PLAIN IN 1964

In 1964 the North China Plain (which accounts for about one-fifth of China's cultivated area) was subjected again to serious flooding and waterlogging caused by persistent and above-normal rainfall beginning in the autumn of 1963 (see the map, Figure 1). An analysis by NPIC 1/ of KEYHOLE photography

substantiate other collateral information indicating that flooding and waterlogging in the North China Plain were far more prolonged and extensive in 1964 than in 1963 and that damage to crops was ocorrespondingly greater.

Although no over-all appraisal of the seriousness of the flood has been reported by the government of Communist China, the size of the area affected can be estimated by an analysis of Chinese press reports, radio broadcasts, refugee reports, COMINT, and photography.

#### 1. Photographic Analysis of Floods in 1963 and 1964\*\*\*

Analysis of photographic coverage during 1963 substantiates earlier estimates that only the fall-harvested crops were seriously affected by the heavy rainfall which began in August 1963. In some areas of the North China Plain the autumn crops in 1963 probably were a total loss (see the map, Figure 2), but in other areas partial harvests were obtained. However, a substantial part of the fall-harvested crops in the areas flooded was lost because of a reduction in quality as

\*\*\* For a detailed discussion of this subject, see CIA/RR ER 65-2, Communist China: Reduction in Domestic Grain Supplies Caused by Poor Autumn Harvest of 1964, February 1965, SECRET.

\*\*\* This section of this publication is primarily a summary of the memorandum prepared by the Photographic Intelligence Division (PID) of NPIC. The memorandum by CIA/PID also included an analysis of photography in the summer of 1962 and spring of 1963, when ground water conditions and cropping patterns are believed to have been more nearly normal.

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well as in quantity.\* From photographic coverage in late 1963 it can be safely concluded that in the affected areas of the North China Plain the fall sowing of grain crops to be harvested in spring and summer of 1964 was substantially curtailed by the wetness of the ground, a condition that persisted throughout the 1963/64 winter period.\*\*

There was no photographic evidence available on conditions in the early summer of 1964.\*\*\* However, an analysis of photographic coverage of the North China Plain beginning in September 1964 indicated that the fall vegetable and grain narvests were seriously reduced (see the photographs, Figures 3 through 6). In some sections of the Plain the floods were worse than in 1963 and affected an already reduced acreage of fall-harvested crops. Reduced acreage, probable serious marginal growing conditions, and then floods affecting the harvest must have decreased the total crop in the Plain in 1964 far below that of 1963.

Photographic coverage in late 1964 and early 1965 showed the North China Plain still to be in a worse-than-normal condition, and it is expected that the acreage of early harvested crops in 1965 at best can be only less than average. Substantial parts of the area still were covered with water; in some cases the condition was notably worse than in the late fall and winter of 1963/64 (see the map, Figure 7). Only a fraction of the usual winter crops appeared to have been sown. There was little concrete evidence of fall field-work or sowing. Photography during the winter showed only scattered evidence of clean-up and preparation of fields for the crop in 1965. It appears, therefore, that unless 1965 is unusually dry in the North China Plain, it would be an almost insurmountable task to complete preparation by the spring of 1965 for a normal acreage of spring-sown

\* For a detailed study of the late summer floods in North China in 1963, see CIA/RR CB 63-92, Economic Effects of the Late Summer Floods in North China, 15 November 1963, SECRET

\*\* In spite of this situation, an increase in the acreage of winter grains was reported, apparently reflecting a shift of winter grains into nonflooded areas that normally would have been allotted to early spring-sown crops. The acreage of these latter crops was less than in 1963.

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Sources	
1.	CIA. NPIC, G-MB-94/65, TS CODEWORD.
2.	CIA. TOKEN-TJ 09953, 11 Sep 64. TS CODEWORD/
3.	Ibid.
	CIA. TOKEN Daily Summary, 19 Aug 64. TS CODEWORD/
	CIA. TOKEN TI-16625, 25 Feb 65. TS CODEWORD
4.	CIA. TOKEN TJ-09953, 11 Sep 64. TS CODEWORD/
	CIA. TOKEN Daily Summary, 25 Apr 64. TS CODEWORD/NO
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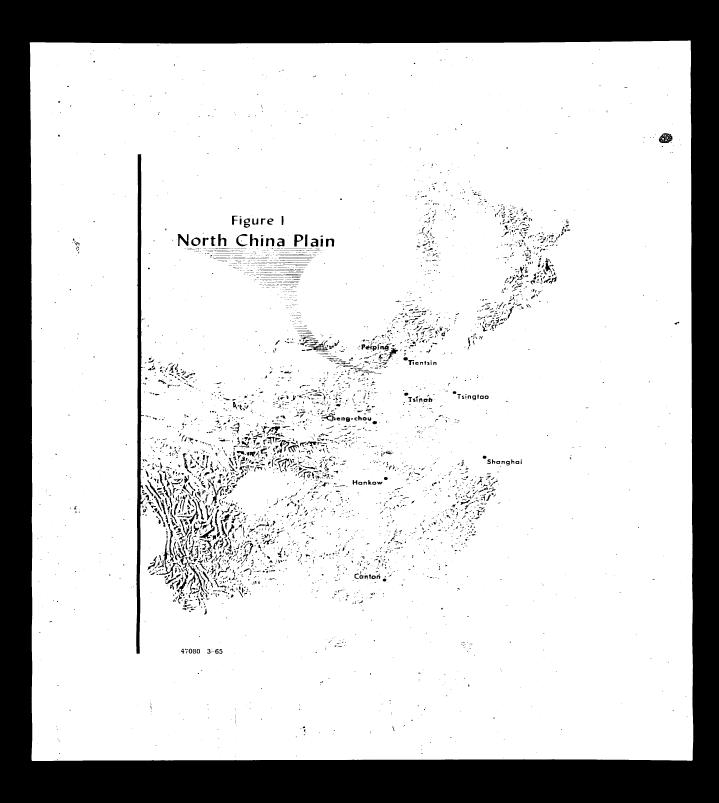
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Flooding in area south of Hsin-chen 38°55'N-II6°IS'E (PID/GMB/P-70I/65)



Figure 4
Flooding and waterlogging south of Yu-tien.

39 40'N-II7 40'E (PID/GMB/P-698/65)

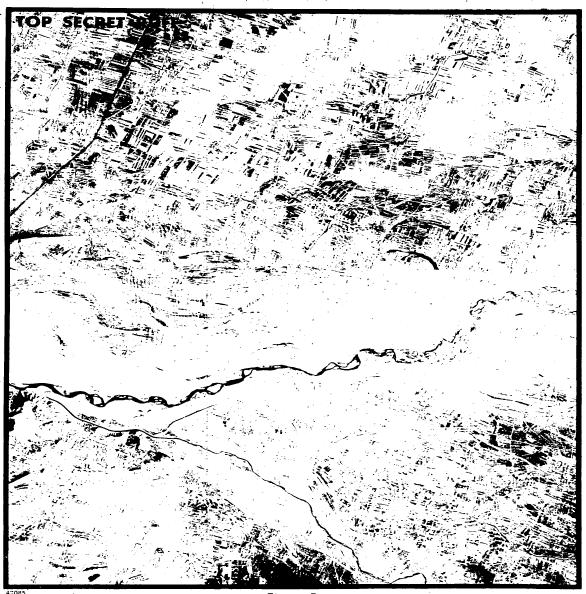


Figure 5

The Luan River Valley south of Luan-bisen. Since the spreading of river silt and erradication of field patterns by flooding there has been little agricultural activity.

39°40'N-118°50'E (PID/GMB/P-696/65)

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Evidence of flooding near Chang-i Note the white patches of frost-covered, wet ground, and light patches of sandy wash over the field patterns.

36°50'N-II9°20'E (PID/GMB/P-693/65)

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